

## REMARKS/ARGUMENTS

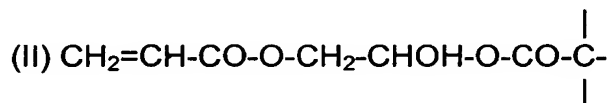
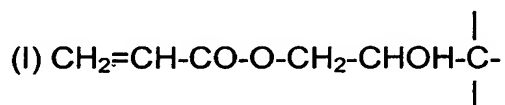
### *Status of the Application*

In the Final Office Action, claims 1-13 were rejected. In the present response, no amendments to the claims were made. Thus, claims 1-13 are pending. No new matter was added.

### *Rejections Under 35 U.S.C. §§ 102(e), 103(a)*

Claims 1-13 were rejected under 35 U.S.C. § 102(e) as anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as obvious over Stengel *et al.* (U.S. Patent No. 6,458,885). Applicants respectfully traverse these rejections.

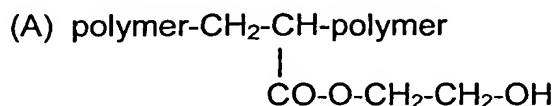
In response to the Examiner's assertion that the present inventive compositions are the same as those disclosed in Stengel *et al.*, Applicants provide the following further explanation as to how the resulting compounds of Applicant's claimed invention differ from those of Stengel *et al.* The structure of the acrylic copolymer in Stengel *et al.* is (a) a monomer according to structure I or II:



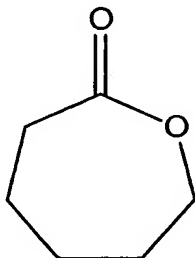
wherein the terminal branched alkyl group has at least seven carbon atoms (preferred structure (a) is the (meth)acrylic acid and Cardura E reaction product (II)); (b) hydroxy alkyl (meth)acrylates; and (c) other monomers, including cycloalkyl (meth)acrylates. The acrylic copolymer of Applicant's claimed invention comprises monomers (1) hydroxy monomers; (2) cycloaliphatic (meth)acrylic acid esters; (3) other monomers; and (4) lactone (to modify OH groups of the copolymer of (1), (2), (3)). Monomers (1) are disclosed in Stengel *et al.* Monomers (2) are also disclosed in Stengel *et al.*, though only in a list of possible unsaturated monomers.

Lactone (4), however, is not used to prepare the acrylic copolymer of Stengel *et al.*, that is, the hydroxy groups of the Stengel *et al.* copolymer are not modified with lactones. In the present invention, the modification of the hydroxy groups of the acrylic copolymer is achieved by reacting the hydroxy group of unit A (unit in the

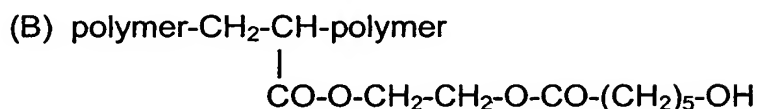
copolymer resulting from the hydroxy monomer), for example a hydroxy ethylacrylate structure as show below:



with a lactone (ring), in the present example  $\epsilon$ -caprolactone:



which leads to the following exemplary structure (B) in the copolymer:



In this reaction, a hydroxy alkyl ester group is again formed in the terminal position. The resulting terminal hydroxy group is far away from the copolymer backbone compared with non-modified hydroxy groups of usual hydroxy (meth)acrylic esters. That modification leads to different properties of the copolymer as well as the final coating composition containing these copolymers. The resulting structural unit (B) above is not present in the acrylic copolymer of Stengel *et al.* Hence, the acrylic copolymer of the present invention differs from those of Stengel *et al.*

The acrylic copolymer of the present invention also differs from the polycaprolactone-type polyesters that can be used in the clear coats of Stengel *et al.* Those polyesters of Stengel *et al.* are reaction products formed from reaction of a cyclic lactone with a polyol or a hydroxy acid, and the resulting polyesters are separate reaction products that are not attached to the backbone of an acrylic copolymer as in the present invention, which are attached to polymer-CH<sub>2</sub>-CH-polymer of structure (B). Therefore, the coating compositions of the present invention and of Stengel *et al.* are not identical; they contain different binders for the curing reaction. These differences in binders are not a question of the process for preparing them, but a question of reactants (monomers) used, which result in different polymer structures.

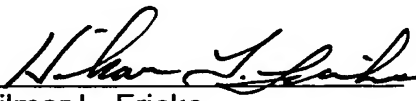
Applicants note that, even if identical components are used to prepare, for example, copolymers, the resulting polymer structure can be different depending on the process used for preparing the polymers. Such differences in structure are sometimes better described by product-by-process claims than by structural features. See MPEP § 2173.05(p)(I) ("A product-by-process claim, which is a product claim that defines the claimed product in terms of the process by which it is made, is proper.").

Applicants also note that the different copolymers in the present invention and in Stengel *et al.* lead to different coating compositions with different technological properties. As mentioned in Applicants' Response to the December 15, 2005, Non-Final Office Action, the focus of the present invention is on a good balance between good scratch resistance on the one hand and good drying properties and hardness on the other hand. Scratch resistance is not an issue in the disclosure of Stengel *et al.*

**SUMMARY**


In view of the foregoing remarks, Applicants submit that this application is in condition for allowance. In order to expedite disposition of this case, the Examiner is invited to contact either of Applicants' representatives at the telephone numbers listed below to resolve any remaining issues. Should there be a fee due which is not accounted for, please charge such fee to Deposit Account No. 04-1928 (E.I. du Pont de Nemours and Company).

Respectfully submitted,

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Dated: August 16, 2006

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Dated: August 16, 2006